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ABSTRACT

This paper examines effects of pressure from the community and teachers' organization on interaction patterns or structures within schools, specifically on normative consensus, upward communication, and facilitative dependence. These structures help determine the extent of cooperation and support teachers receive. Questionnaire data from virtually all administrators and 253 teachers in a stratified random sample of 34 junior high and middle schools are used for a school-level correlation analysis. Community pressure generally disrupts the structures of cooperation, but at severe levels of intrusion into the school, the effect may be reversed as administrators and teachers close ranks against the community. Teacher organization pressure increases consensus among teachers but decreases it between faculty and principal and between principal and superintendent. Such pressure reduces the receptivity of the principal to teacher ideas (in their eyes, at least), although enhancing his actual knowledge of teacher concerns. Finally, teacher organization activity at the district level makes it harder for school personnel to help one another. These findings are interpreted in the light of changes in school-environmental relations, wherein community delegation of authority to professionals is giving way to community surveillance and influence in the schools. (Author)

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Environmental Pressure and School Organizational Structures

(A paper presented at the Annual Meeting of the American Sociological Association, September, 1978, at San Francisco.)

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Abstract

This paper examines effects of pressure from the community and teachers' organization on interaction patterns or structures within schools, specifically on normative consensus, upward communication, and facilitative dependence. These structures help determine the extent of cooperation and support teachers receive. Questionnaire data from virtually all administrators and 253 teachers in a stratified random sample of 34 junior high and middle schools are used for a school-level correlational analysis. Community pressure generally disrupts the structures of cooperation, but at severe levels of intrusion into the school, the effect may be reversed as administrators and teachers close ranks against the community. Teacher organization pressure increases consensus among teachers but decreases it between faculty and principal and between principal and superintendent. Such pressure reduces the receptivity of the principal to teacher ideas (in their eyes, at least), although enhancing his actual knowledge of teacher concerns. Finally, teacher organization activity at the district level makes it harder for school personnel to help one another. These findings are interpreted in the light of changes in school-environmental relations, wherein community delegation of authority to professionals is giving way to community surveillance and influence in the schools.

This paper examines organizational structure in American public schools faced with varying degrees and types of environmental pressure. It considers three structures that are likely to be influenced by such pressure and to have an important impact on teacher work experiences: normative consensus, upward communication, and dependence on the help of others (facilitative dependence). The findings should, therefore, illuminate teacher experiences in the face of environmental pressure.

The usual conception of organizational structures centers on their usefulness for organizational goals. In the context of examining individual experience in organizations, a conception which emphasizes relationships among individuals (rather than the purposeful arrangement of roles and resources) is more appropriate. Weick's definition of organizational structure as "regular patterns of interlocked behavior" (1969:43)

subsumes the three "structures" to be considered here. Each of them alters the probability of the successful pursuit of personal goals in the organizational context. The pursuit of personal goals is enhanced by agreement with other organizational members, especially with superordinates, about appropriate goals and means for the organization (normative consensus); by a substantial flow of ideas and concerns from subordinates to superordinates, coupled with superordinate receptivity to these ideas (upward communication); and by the exchange of assistance among organizational members (facilitative dependence) (Leiter, 1977). Taken together, these structures partially describe the extent to which organizational members cooperate and receive support on the job, as opposed to working at cross purposes or having little impact on one another.

The effect of environment on organizational structure has been a major thrust of contemporary organizational research. For present purposes, key insights in this thrust include the impact of environmental pressure on organizational goals (Selznick, 1949), the need for organizations to buffer their technical cores from environmental uncertainty (Thompson, 1967), and the dependencies arising from the management of environmental uncertainty (Hickson et al., 1971; Hinings et al., 1974). More generally, this analysis portrays structure as the set of constraints within which organizational adaptation to environmental demands takes place, shaping the attention and decision making process of actors whose capacity for rational action is limited (March and Simon, 1958).

The analysis investigates the general proposition that the level of environmental pressure shapes each of the three organizational

structures, and thereby the extent of cooperation and support. First, under pressure from the environment, administrative resources are committed to mollifying the environment rather than building internal normative consensus. Moreover, such pressure often reflects dissensus among environmental actors about organizational operations and products. This dissensus may be echoed inside the organization. Second, as administrators focus their attention on the environment, they have less time and resources for responding to subordinate ideas and concerns. In addition, claims from the environment may well contradict the claims of subordinates. Effective upward communication suffers. Finally, environmental pressures creates uncertainty for subordinates about impending changes and about the adequacy of current performance. Help from superordinates can aid in dealing with such uncertainty, but administrators who are occupied with environmental claims have little time and resources with which to help subordinates. In fact, by buffering enviromental pressure, administrators may incur a type of dependence in their subordinates which the latter experience as a hindrance rather than a help. In contrast to its effects on the help superordinates offer, environmental pressure can be expected to increase facilitative dependence among subordinates as they close ranks against external threats.

The focus on school organizations follows from the salience of both environmental pressure and structures of cooperation and support for schools. Pressure on schools from their environments is growing. Until recently, such pressure was minimal. The supply of students was largely assured. Communities were fairly willing to vote school taxes.

Legislatures supplemented when they were not. Teacher organizations were far from militant. Laymen did not often criticize or try to influence the kind of training students received. Carlson (1964) has aptly characterized schools in this unpressured context as virtually buffered from environmental contingencies.

Recent years have seen the emergence of threats to this environmental tranquility. The supply of students has fallen dramatically with declining fertility. Voters have rebelled against ever-rising school taxes. The "company union" days are past in many parts of the country; teachers now grieve and strike. State agencies and parent groups have become much more active in the evaluation of student achievement and threaten to assess accountability.

Besides increased environmental pressure, the focus on schools derives from the salience for school organizations of the structures of cooperation. Insofar as educators' claims to be professionals are justified, schools should be structured to further professional practices. Upward communication and facilitative dependence are particularly important here. Blau (1968) has argued that professionals working in organizations regard the hierarchy of authority as useful when they can pass ideas upward with reasonable hopes of implementation. Similarly, professional status implies that subordinates and superordinates relate as colleagues jointly to facilitate service to clients.

Potential and actual environmental intrusions into the internal decision making process of the school represent the breakdown of the traditional buffered relationship between school and community. Community dissatisfaction manifests itself diversely as tax revolts,

attacks on teachers, and demands for curricular change. Moreover, intrusions into internal school operations threaten the professional claim of educators: the community is reasserting control it had delegated to experts. This focus on potential and actual intrusions leads to a three-part conceptualization of environmental pressure: dissatisfaction, which motivates intrusions; organization and participation, which facilitate intrusion; and actual intrusion. (Note that the relationship between dissatisfaction and organization remains to be investigated.)

Beyond the consideration of environmental pressure in general, we will pay special attention to effects on the structures of cooperation and support arising from teacher organization or union activity. Perceptions of union activity shift with the circumstance and vary among teachers. From one point of view, the teachers' organization is a part of the school's environment, much as a parent group or the school board. As such, it must be mollified and buffered. From a second perspective, however, the teachers' organization is not an environmental actor but rather the teachers' agent. When this perspective holds, pressure brought by the teachers' organization is probably associated with increased solidarity and cooperation. Indeed, a key role of the teachers' organization, consonant with this perspective, is to keep other environmental threats at bay, for example, arbitrary teacher transfers and layoffs due to declining enrollments and revenues and efforts to hold teachers responsible for poor student achievement. A third point of view combines these two faces of teacher organization. One face operates outside the school on district and regional issues, calling strikes,

collecting dues, and negotiating contracts. This face is seen as a part of the environment, asking teachers to choose between their loyalties to their colleagues and to their school. The other face operates within the school, usually through the building representative, negotiating with the principal, filing grievances when the principal oversteps negotiated limits, and facilitating the pursuit of personal and professional goals within a bureaucratic context. Due to these varied perceptions of the teachers' organization, its effects on the structures of cooperation and support are both interesting and hard to predict.

Overall, the analysis that follows seeks to substantiate the proposition that environmental pressure disrupts the structures of cooperation in schools. The conceptualization and operationalization of both environment and structure are adequately detailed and sensitive, moreover, to promise elaboration of the general proposition in a more conditional form as the data are brought to bear.

THE DATA

The data are derived from a questionnaire survey of teachers and administrators in 34 junior high and middle schools in Southeastern Michigan. An original sample of 56 schools was drawn from a population of 210 schools in a four-county sampling area. Upper middle class suburban areas are slightly underrepresented in the final sample. The sample constitutes a substantial proportion of the population. The significance of relationships among variables in the sample, thus, is underestimated, because the "effective sample size" is larger than the nominal sample

size in the circumstance (Kish, 1965:43-45). The sample was stratified on school size, percent minority in the student body, and a faculty characteristics index composed of mean salary, mean experience, and the proportion with a master's degree. The population of inference here does not include schools whose faculties were neither above the median on all three of these faculty characteristics nor below the median on all three. Since an analysis of all junior high and middle schools in Michigan (Leiter, 1977) shows that the faculty characteristics index behaves linearly with respect to all available school structure and membership variables, there is every reason to expect that findings here will interpolate to the excluded cases.

Different questionnaires were administered to school administrators and to random samples of teachers at each school, stratified by age and sex. Virtually all administrators cooperated; the response rate among teachers was 69%, yielding 253 teacher respondents or an average of 7.23 per school.

THE VARIABLES

The appendix contains details on the operationalization of the concepts. The descriptions which follow are meant to enable a first reading of the analysis.

Some variables are created from administrator data, others from the teacher data, and one, a behavioral measure of upward communication, uses both data sources. Where teacher data are used, the variable usually is a mean across teachers at the same schools. The principal's responses are used where available for variables based on administrator data.

Environmental pressure from the community as a whole is measured in terms of the estimated level of community dissatisfaction with the schools, the perceived level of community organization and unity vis-a-vis the schools, and the number of actual community efforts to influence internal school decisions. Community dissatisfaction is estimated independently by an administrator and teachers at the school.

Pressure from the teachers' organization is operationalized in terms of its potential to intrude and actual intrusions. The potential for intrusion (analogous to community organization, above) is captured by a scale that assesses the organization's strength in terms of its impact on the teachers' master contract and by an index of rank-and-file participation within the school. Actual intrusions are operationalized by the number of recent grievances filed at the school and by the number of times the districts' teachers have gone on strike recently. These four variables can also be classified into measures of district-level activity (strength and strikes variables) and school-level activity (participation and grievances variables).

Normative consensus is measured among the schools' teachers, between the teachers and the principal, and between the administrators and a superordinate. For principals, this means the superintendent; for assistant principals, it means the principal.

Upward communciation is operationalized behaviorally and perceptually. The behavioral measure compares teacher reports of their greatest concerns with administrator estimates of teacher concerns. The greater the agreement, the greater the upward communication.

Teacher uncertainty is measured in two ways. The first is teacher perceptions of the faculty's uncertainty about several matters, most of which concern the possibility of performing well on the job. The second is teacher self-reports of insecurity, uncertainty, and tension. The second measure can be taken as relating to uncertainty more about job security than about the act of teaching itself.

The measures of facilitative dependence tap the help teachers feel they receive in trying to do their job successfully. Three variables look at help received overall, from other teachers, and from the principal.

FINDINGS

Although 34 cases are respectable for a study of organizations, strict adherence to tests of statistical significance would lead to discounting the substantive significance of many fairly large relationships (Selvin, 1957). Results of significance testing will be reported to give chance its due, but they will not be emphasized in the analysis. Rather, the size of relationships, their patterning, and the persuasiveness of their interpretation should be used to evaluate their significance.

COMMUNITY PRESSURE

In order to interpret the individual relationships of community dissatisfaction, organization, and intrusions with the three structures as the impact of community pressure, the relationships among the three constituents of community pressure must be established. Earlier, we assumed that dissatisfaction and organization are each positively related to actual intrusions. In fact, the correlation of dissatisfaction

with intrusions is positive (teachers' estimate r = .26; administrator's estimate r = .28). The more dissatisfied the community, the more intrusions it makes on the school. However, organized communities are not intrusive (zero-order r = -.08; partial r, controlling for teachers' and administrator's estimates of community dissatifaction, respectively, are -.01 and .09). This may simply mean that the intrusions reported by administrators are usually made by individuals or small groups rather than by such formal organizations as a parents' organization or the Chamber of Commerce. Moreover, the same communities that school personnel perceive as dissatisfied are not reported to be well-organized (r = -.29 for the teacher estimate of dissatisfaction, -.51 for the administrator estimate; the latter correlation is significant at the .01 level). Dissatisfied communities tend to be fragmented, again supporting the idea that actual intrusions are made by individuals and suggesting that dissatisfied communities tend to dissensus. Overall, community pressure can be associated with dissatisfied and intrusive, but unorganized communities.

The remaining data analysis is presented in three parts, one for the impact of environmental pressure on each of the three structures of cooperation. In each part of the analysis, expectations will be detailed and, then, the data will be reported and interpreted. These expectations are grounded in case study data reported in Leiter (1977).

NORMATIVE CONSENSUS

Expectations

Environmental pressure may, arguably either enhance or retard the formation of consensus within the school about school goals and appro-

priate means to meet those goals. On the one hand, a low level of environmental intrusion may reflect agreement between the community and school administrators about goals and appropriate methods in education, that is community satisfaction with the operation of the school. In the absence of community efforts to participate (intrude) in decision making in the schools, the principal is allowed considerable autonomy in inducing teachers to join this consensus. Moreoever, the administration has adequate time and energy to concentrate on internal school affairs, actively supporting the pursuit of goals and means consistent with the consensus.* Conversely, a demanding, intrusive environment forces administrators to devote a large proportion of their time to external matters. Internally, a vacuum of leadership and coordination results. Teachers, counselors, and administrators disagree about appropriate goals and means. Overall then, the greater the demands and intrusions on the school, the less the consensus within the school. This expectation is based on a particular picture of community-school relations. In this picture, the community is the original repository of authority for the definition of school goals and educational methods. When it is satisfied with the way its agents are operating the school, it delegates control to them.

The opposite expectation for the impact of environmental pressure on within school consensus can also be argued. A hostile environment

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*This may also result from community neglect of the schools. Indeed, such neglect may accompany dissatisfaction if the community is not stirred readily to actual intrusion. The merely moderate correlation of dissatisfaction and intrusion indicates that such "lethargy" is not uncommon.

may create solidarity and consensus among school actors, as they close ranks to take a self-protective posture (Simmel, 1955; Coser, 1956).

Consensus in these opposing explanations derives from different school-environment relationships. In one, consensus encompasses school and environment. In the other, consensus in the school derives from a division between school and environment. These perspectives are theoretically irreconcilable, but the data may not clearly support one or the other due to the simultaneous operation of both dynamics. Consensus encompassing school and environment may give way to conflict between them, generating a new within-school consensus in defense against the intrusions of the environment.

Pressure from the teachers' organization can be expected to have a different effect on consensus among teachers and between teachers and other school actors. An increase in such pressure is probably accompanied by teachers' redefinition of their relationship with administrators as conflictual. This should increase their within-group consensus while reducing their agreement with administrators. By the Simmelian argument, moreover, as such external pressure increases, consensus should increase within the administration. At high levels of teacher organization pressure, which occur when there are frequent strikes, however, some dissensus may arise within the faculty over such issues as responsibilities to children, legal risks, and willingness to forego pay.

Teacher organization strength and rank-and-file participation may have different effects from intrusions measured by the grievances and strikes measures. Grievances and strikes clearly represent a conflictual picture of administrator-teacher relations. Even without overt labor

conflict, grievances or their threat are a tool against administrators. As the building representative of the teachers' organization at one school put it, sometimes we file a grievance "just to keep him (the principal) honest." A strong teachers' organization, however, may be not only a tool to protect teacher interests and rights, but also a way to impose discipline on teachers. At another school where the teachers' organization is particularly strong, the principal has regular consultative meetings with the union committee even while guarding his prerogatives to make the final decisions. Frequently, when the administrator gains the approval of organization leaders for his ideas or when ideas are evolved jointly, these leaders help to convince teachers of the legitimacy of the idea and gain cooperation. In this way, a strong teachers' organization may increase the level of agreement between teachers and administrators.

Findings

The data in Table 1 are largely consistent with the perspective in which environmental pressure detracts from within school consensus. Community dissatisfaction, especially by teacher esitmates is negatively associated with most of the perceptual measure of consensus. Organized and unified communities, already noted as tending to be more satisfied, are associated with consensus within schools, except that net of other environmental effects, community organization accompanies dissensus between faculty and principal.

(Insert Table 1 here.)

Similarly, but more weakly, a large number of community intrusions into the school is associated with dissensus between faculty and adminis-

trator and among administrators, but with consensus among teachers. Under these circumstances of actual community intrusion into school affairs, actors with the same interest increase their within-group consensus, supporting the Simmelian perspective, although consensus between hierarchical levels decreases, supporting the other perspective. For example, unity among teachers is somewhat greater where the number of intrusions is large. Furthermore, if one disaggregates the measure of within-administration consensus into the principal's perception and the assistant principal's perception, the dissensus detected is between principal and central office personnel ($r = -.31$), not between assistant principal and principal ($r = -.04$). These findings present small hints that as community satisfaction is replaced by extreme community dissatisfaction, an all-encompassing consensus, may be replaced by within-group consensus and between-group conflict.

Teacher organization activity has an interesting and sometimes ironic impact on within-school consensus. The strongest correlate of strong teacher organization is teacher perceptions that faculty and administration are at odds. One cannot ascertain from these correlational data, of course, whether unionization drives a wedge between teachers and administrators or whether unionization is a response to preexisting disagreements. Not surprisingly, rank-and-file participation is strongly associated with faculty consensus, but strong teacher organizations which have secured substantial protection for teachers are associated with moderate faculty dissensus. Such organizational strength may be accompanied by the alienation of the leadership from the rank-and-file to the detriment of faculty consensus. Indeed, the

relationship of strength and participation is negative although weakly so ($r = -.14$). The difference in direction of the zero-order effects of grievances and strikes on faculty consensus can be similarly understood. Grievances are usually building-level expressions of teacher militance, while strikes reflect district-wide militance. The contrast is analogous to the differences between rank-and-file participation and organizational strength. The differences between the effects of grievances and strikes disappear when the effects of participation and strength are taken account of. Teacher organization largely enhances solidarity among administrators except however, that frequent grievances are associated with disagreement among administrators. This may come from the intermediate hierarchical position of the principal. When a grievance is filed, he may often be forced to acquiesce in the superintendent's or the school board's wishes for the settlement, rather than being able to follow his own inclinations.

UPWARD COMMUNICATION

Expectations

Once more, one may reasonably argue opposing expectations for the impact of environmental pressure. On the one hand, pressure from the school's environment may detract from upward communication by so preoccupying the administration that it cannot pay adequate attention to teacher ideas and complaints. This perspective on the impact of environmental pressure emphasizes the boundary-spanning role of an educational administrator. This role includes the interpretation of environmental demands to teachers at the technical core of the school and the buffering

of the technical core from these demands. (See Parsons, 1956 and Thompson, 1969 for general discussions of roles performed at organizational boundaries and technical cores.) When environmental demands are particularly strong, these roles may force boundary spanning actors primarily to face outward and largely to ignore teachers, even while serving the needs of teachers for a predictable and stable setting in which to teach. From this perspective, increased environmental pressure can be expected to decrease effective upward communication of teacher ideas and concerns to administrators. Boundary-spanning administrators may stop receiving information from teachers and substitute information from environmental components.

An alternate set of expectations suggests that environmental pressure should enhance solidarity among teachers and administrators by helping them to define their situation in the same terms, as they face the common problems arising from environmental pressures (Simmel, 1955; Coser, 1956). Such solidarity should assist teachers in communicating their ideas to administrators. Of course, one particular type of environmental pressure, teachers' organization activity, is unlikely to enhance solidarity between teachers and administrators. While such pressure may help administrators better to understand teacher concerns, it is likely to destroy any feeling on the part of teachers that administrators are active in their behalf. The data will manifest this as different effects for the behavioral and perceptual measures of upward communication.

Findings

Table 2 shows that by administrator estimates community dissatisfaction is moderately negatively associated with upward communication.

Teacher estimates of community dissatisfaction, however, are associated positively with upward communication measured behaviorally. In addition, the number of actual community intrusions is moderately related to good upward communication by both measures. By some measures, then, community pressure seems to interrupt upward communication, by others to enhance it. The reconciliation again recognizes that community pressure may have different effects depending on its severity. Actual intrusions into the school may be interpreted as more severe pressure than dissatisfaction. Teachers, buffered from moderate community pressure by the administration, may only become aware of stronger pressure, expressed as intrusions that the administration fails to buffer. This helps explain why the correlation of the teacher estimate of community dissatisfaction with the behavioral measure of upward communication is similar to that with the number of intrusions. This two-tiered approach suggests that under moderate community pressure, the administration concentrates on its boundary-spanning role, buffering the technical core of pedagogical activity, and in the process loses touch with teacher concerns. Under severe community pressure, however, the solidarity of school personnel increases as they take a defensive stance against the community. Their solidarity enhances upward communication.

(Insert Table 2 here)

Pressure from the teachers' organization has the same effect as pressure from the community, diminishing perceived upward communication. This may not be due to the preoccupation of the administration but to the "poisoning" of the school atmosphere between teachers and building administrators. Frequent grievances have this effect, but strikes do not.

(There is no page 18)

Teachers probably see strikes as their affair with the school board or superintendent. Indeed, informal conversation at several sample schools suggested that the principal often is sympathetic with the teacher position in labor disputes. Grievances, in contrast, reflect teacher perceptions that the principal is not sympathetic to their concerns. Many grievances are targeted against decisions the principal has made which the teachers feel contravene the contract. In addition, grievances may cause the principal to take a tough stance toward the teachers in order to allay fears in the central office that he cannot control his employees. In so doing, he may lose teacher confidence in his openness to their concerns and ideas. Rank-and-file participation in the teacher organization substantially enhances administrative awareness of teacher concerns. Otherwise, the effects of teacher organization on actual upward communication are minimal. Overall, then, the participation of teachers in their organizations helps clarify for administrators the issues of greatest concern to teachers but leads teachers to see their administrators as unsympathetic to teacher problems. Strong teachers' organization activity is not conducive to solidarity among teachers and administrators.

UNCERTAINTY AND FACILITATIVE DEPENDENCE

Expectations

Teachers may experience dependence on others in the school as facilitative or hindering or they may not experience dependence at all. As environmental pressure increases, administrators and even teachers are likely to have less and less time and energy with which to help other teachers. An administrator who emphaszies the boundary-spanning

aspects of his role, however, may be able to manage uncertainty in the environment in such a manner as to increase the dependence of teachers on him. They depend on him to ward off the uncertainty, that is to buffer their work at the technical core where predictability is important. For two reasons, however, they are unlikely to experience such dependence as facilitative. First, teachers are likely to want the principal to handle environmental problems when he shares their educational goals and approaches. We have already seen, however, that environmental pressure disrupts just this normative consensus. Second, exchange theory (for example, Emerson, 1962) argues that dependence is a resource for the generation of power. Organizational applications (for example Crozier, 1964; Hickson et al., 1971; Hinings et al., 1974) have pointed to uncertainty as the source of dependencies. Thus, by managing environmental uncertainty a principal may generate power over his teachers. A principal who uses dependence to increase his dominance over teachers will likely be perceived as a hindrance by them.

Environmental pressure, thus, affects teacher dependence in two ways. First,the help a teacher receives from others decreases as they expend their time and energy on the environment. Second, teachers feel hindered by those who manage uncertainty. The two reinforce each other.

Since environmentally induced uncertainty is a key determinant of dependence, the analysis explores relationships between environmental pressure and teacher experiences of uncertainty. Such pressure can cause uncertainty by upsetting routines and threatening jobs, as budgets are cut and individual teachers are criticized. Additionally,

insofar as community pressure is associated with dissensus about school goals and means, uncertainty about appropriate classroom practice may result.

Findings

Examining the relationships among the measures of uncertainty and facilitative dependence allows us to evaluate the relative importance of the two sources of dependence. Table 3 presents the correlations among these measures. For the most part, the findings are expected: the two measures of uncertainty, while tapping different sources of uncertainty, are strongly related. The three measures of facilitative dependence relate to one another, as well. When teachers report receiving help from others, overall, they appear to mean their fellow teachers more than the principal. The experience of uncertainty, especially that due to the breakdown of routine, is accompanied by diminished help overall and from other teachers. Thus, in the very circumstance where help would most aid teachers in their work, that help is absent. Surprisingly, however, the experience of uncertainty appears to be associated with receiving neither more nor less help from the principal. This suggests that uncertainty arising from environmental pressure is not generally tranformed into teacher dependence by the principal's management.

(Insert Table 3 here)

Turning to data reported in Table 4 on the impact of environmental pressure on uncertainty and dependence, the expected pattern of relationahips generally prevails. Teacher uncertainty increases where

environmental pressure is high, both for pressure from the community and from teachers' organization. This pattern is clearest in the zero-order relationships for community pressure. The partial correlation for the administrator's estimate of community dissatisfaction and faculty uncertainty is probably so large because it subsumes the impact of community organization; the administrator as boundary spanner is likely more conscious of community organization than are teachers.

(Insert Table 4 here)

Two apparent exceptions to the general pattern can be partially explained. First, actual intrusions by the community have a minimal effect on teacher uncertainty. The analysis of the determinants of within-school consensus showed that community intrusions somewhat increase consensus among teachers. Such teacher consensus may help defuse the anxiety which intrusions bring. In effect, when the threat of intrusion is realized, the faculty unites to defend itself. With defensive activity comes greater certainty about the outcomes.

A second exception to the pattern is that rank-and-file participation in the teacher's organization and the number of grievances filed relate inversely to uncertainty. This is in contrast to the other measures of teacher organization activity with which uncertainty increases. Here the explanation is that grievances represent pressure initiated by a school's teachers often directed at their principal, while strikes or the contract provisions which comprise the strength scale represent pressure at the district level. Moreover, participation and grievances are actions taken by a school's teachers, not intrusions against these teachers by their environment. As such, they should decrease uncertainty, not increase it. Indeed, grievances may be filed

in response to efforts by administrators to substitute flexible procedures (uncertain) for inflexible contract provisions (certain).

Table 4 shows that environmental pressure also has a regular effect on the way teachers experience their dependence on others, specifically the help the individual teacher receives from others. Overall, the greater the environmental pressure the less help teachers receive from others at school. This pattern obtains for the effects of pressure from the community and the teachers' organization insofar as it operates at the district level (i.e., strength, strikes) and, therefore, in the schools environment. The pattern is especially consistent in the zero-order relationships. Interestingly, teacher organization activity inside the school, especially participation, shows the opposite pattern, enhancing facilitative dependence. Grievances, naturally, are not associated with receiving help from the principal, because they are often a part of a conflictual relationship with him.

DISCUSSION

This consideration of the impact of environment on school organizational structures has focused on three structures with substantial implications for the way teachers experience their work. Normative consensus, upward communication and facilitative dependence describe interaction patterns in which the collectivity supports the pursuit of individual teachers' goals. This combination of structures is useful for two rather different types of teachers. For one, the solution to pedagogical problems is through changes which go beyond his own classroom, such as the introduction of team teaching. For such teachers, the three

structures considered here underwrite the cooperation needed to innovate in this way. A teacher of the second type relies on himself as a solo practitioner or classroom craftsman (Lortie, 1975) to solve problems. Such a teacher needs less the cooperation of others as co-innovators than their support in his own problem solving. The three structures provide this support.

The data analysis shows that, overall, environmental pressure interrupts these structures of cooperation and support. Ironically, environmental pressure often defines new problems for teachers of both types to solve and increases the urgency with which they must be confronted. For example, the movements for educational accountability, economization, and desegregation require teachers to innovate and problem solve. We have seen, however, that environmental pressure of this sort militates against such teacher response by disrupting structures of norms, information, and help. Thus, pressure from the environment both adds to teachers' problems and makes the solution of those problems more difficult. These general statements must be qualified in two ways. First, actual intrusions by the community into the school seem at times to regenerate cooperation and support within the school. The principal's distinct role as boundary-spanner gives way to solidarity across hierarchical levels under such extreme pressure. Second, pressure from the teachers' organization originating inside the school does not appear to interrupt cooperation and support among teachers but does in some way disrupt these interactions with the principal.

From the school organization's rather than the teachers' point of view, altered structures under environmental pressure can be understood as adaptation, providing a new repertoire of responses to environmental demands for reasserted control of the schools (March and Simon, 1958). An important mechanism through which environmental pressures leads to decreases in cooperation and support is the change in the role of principal from internal manager to boundary-spanner. The internal manager coordinates and leads; the boundary-spanner buffers and interprets the environment for the technical core. As the principal's role changes, teachers experience costs in chaos (lack of coordination) and directionlessness (lack of leadership). The school organization, however, is adapting to the environment through the principal's new role as boundary-spanner. He may be seen by community elements which participated in his selection as their agent. He may voice an educational philosophy closer to that of powerful environmental actors, such as the federal courts and leaders in the movement for educational accountability, than to that of many of his teachers. By virtue of the boundary-spanning role, the school increases its effectiveness in interchanges with its environment.

However externally adaptive these structural changes, they make the solution of problems within the school by the cooperation of experts or by the solo practice of the craftsman quite difficult. This discontinuity between external adaptation and internal efficiency reflects the dominant view of organizations that internal functioning is most efficient when the environment is minimally felt. Contemporary organization and management theory (and, indeed, this paper) have, thus, stressed organizational boundary agents in their role as buffers of the

technical core (Thompson, 1967). Louis Pondy (1976) has suggested, however, that organizations may find tremendous new resources for growth and change by welcoming in environmental influences rather than attempting to buffer them out. For teachers and schools, this would, of course, represent a total departure from the traditions of bureaucratization and professionalization. Nonetheless, such a departure may be preferable to the breakdown of key structures of support and cooperation that this paper suggests accompanies environmental pressure. In either case, changes in the work experiences of teachers will be profound.

TABLE 1. Correlations[a] of Environmental Pressure and Normative Consensus

	Normative Consensus					
	Among Faculty		Between Faculty and Principal		Among Administrators	
Community Pressure	Zero-order	Partial	Zero-order	Partial	Zero-order	Partial
Dissatisfaction						
Administrator estimate	-.24	.31	-.45*	-.11	-.26	.08
Teacher estimate	-.07	-.25	-.46**	-.30	-.26	-.24
Organization	.36*	.30	.11	-.30	.17	.04
Intrusions	.17	.14	-.15	-.10	-.27	-.29
Teacher Organization Pressure						
Organization						
Strength	-.11	-.23	-.32	-.44	.10	.11
Rank-and-file participation	.62**	.77**	-.01	-.09	.01	.25
Intrusions						
Strikes	.17	-.05	-.04	.15	-.41*	-.45
Grievances	-.26	-.05	-.32	-.06	-.15	.27
Descriptive Statistics						
Mean	3.60		0.00		3.27	
Standard Deviation	.57		.71		.94	

*Significant at .05 level

**Significant at .01 level

[a]Ns range from 26 to 34 for zero-order correlations. N = 21 for partial correlations.

TABLE 2. Correlations[a] Between Environmental Pressure and Upward Communication

	Upward Communication			
Community Pressure	Behavioral Measure		Perceptual Measure	
Dissatisfaction	Zero-order	Partial	Zero-order	Partial
Administrator estimate	-.18	-.35	-.25	-.15
Teachers estimate	.10	.32	-.29	.03
Organization	.14	-.01	.01	-.22
Intrusions	.25	.30	.07	.20
Teachers Organization Pressure				
Organization				
Strength	-.02	-.04	-.32	-.35
Participation	.37*	.12	-.10	-.43
Intrusions				
Strikes	.05	.13	-.10	.15
Grievances	.01	.02	-.30	-.17
Descriptive Statistics				
Mean	.81		1.34	
Standard Deviation	.38		1.46	

* Significant at .05 level
** Significant at .01 level

[a]Ns for zero-order correlations range from 26 to 34. N = 21 for partial correlations.

TABLE 3. Correlations[a] Between Uncertainty and Facilitative-Dependence

	(1)	(2)	(3)	(4)	(5)
Uncertainty					
(1) Describing faculty		.41*	-.01	-.19	-.07
(2) Describing self			-.44**	-.21	.00
Facilitative-Dependence					
(3) Help received overall				.49**	.21
(4) Help received from teachers					.26
(5) Help received from principal					
Descriptive Statistics					
Mean	.06	.06	1.92	1.95	2.04
Standard Deviation	.66	.66	.28	.26	.32

*Significant at .05 level

**Significant at .01 leval

[a]N = 34 for all correlations.

Table 4. Correlations[a] Between Environmental Pressure and Uncertainty and Facilitative Dependence

	Uncertainty				Facilitative Dependence—Help Received					
	Faculty		Self		Overall		From Teachers		From Principal	
Community Pressure	Zero-order	Partial	Zero-order	Partial	Zero-order	Partial	Zero-order	Partial	Zero-order	Partial
Dissatisfaction										
Administrator estimate	.41*	.57*	.36*	.25*	-.24	.35	-.41*	-.13	-.13	.09
Teacher estimate	.44**	-.20	.46**	.36	.01	.11	-.13	-.04	-.19	-.23
Organization	-.27	.00	-.08	.32	.23	.04	.38*	.36	.05	-.05
Intrusions	.06	-.02	.09	-.09	-.02	-.03	-.01	-.08	.01	.19
Teacher Organization Pressure										
Organization										
Strength	.19	.24	.02	-.19	.03	-.08	-.26	-.33	-.07	-.07
Rank-and-file Participation	-.23	.03	-.06	.11	.24	.05	.37*	.14	.07	-.21
Intrusions										
Strikes	.24	.03	.28	.08	-.34	.00	-.28	.23	-.04	-.06
Grievances	-.03	-.48	.05	-.27	.22	-.32	.17	.45	-.20	-.11

*Significant at the .05 level

**Significant at the .01 level

[a]NS for zero-order correlations range from 28 to 34. N=23 for partial correlations.

APPENDIX: OPERATIONALIZATION OF VARIABLES

Community pressure: dissatisfaction

Two scales were formed from teacher and administrator estimates of community attitudes. Principal component analysis was used to weight the items in the scales. A school values for the teachers' responses was derived by taking the mean of the scale value across teacher respondents at each school. The items and their loadings on the scales are:

Teachers' scale

Teachers and parents do not get along well here. (.36)

Parents question the authority of the principal. (.35)

There is considerable mistrust of the schools in this community. (.41)

There is pressure in this community for a return to basics in the school. (.27)

The community seems afraid that the schools are wasteful. (.37)

The community seems afraid that the schools are not teaching values it holds dear. (.39)

Community support for the schools is rising. (-.34)

Administrator's scale

Parents of students here would like to see significant changes made in this school. (.29)

Teachers and parents do not get along well here. (.33)

The parents and I generally see eye-to-eye on issues concerning their children's welfare. (-.31)

There is pressure in this community for a return to basics in the school. (.00)

People in this community are afraid that their schools are inefficient. (.39)

People in this community provide generous support for their schools. (-.29)

People in this community generally believe teachers hold the same values they do. (-.39)

The people in this community support the amount of innovative educational techniques we are using here. (-.30)

The parents of students here are quite satisfied with the school. (-.37)

In this community there is considerable mistrust of schools. (.32)

The teachers' scale explains about fifty-five percent of the variance among the items in it. The administrator's scale explains forty-four percent of its common variance.

Descriptive statistics for the teacher and administrator scales respectively are:

means: .01, .00

standard deviations: .57, 2.1

Community pressure: organization

The scale was formed by principal compenent analysis from administrator data. The items and their loadings on the scale are:

Is there an active parents organization or parent-teachers organization at this school? (yes = 1, n = 2) (-.59)

The parents here are well organized to present their wishes. (.60)

The community is divided in its attitudes toward the school. (-.54)

The scale explains about fifty-one percent of the common variance among the items.

The mean is .00.

The standard deviation is 1.38.

Community pressure: intrusions

This variable is the number of times according to an administrator, there has been an effort in the last two years by parent, organized group, businesses, or other parts of the community to make their opinions felt in the school. The mean is 7.64. The standard deviation is 10.23.

Teacher organization: strength

Administrator data is used to derive a Guttman scale with a coefficient of reproducibility of .94. The component items in the order in which they are combined to build the scale are:

A teacher who refuses to pay dues to the teachers' organization is discharged from the staff.

A grievance by an individual teacher is settled by compulsory arbitration of a neutral party if it is not settled by other steps.

Teachers are assured by contract of representation on the district's curriculum committee.

The scale values and the percentages of the schools at each value are:

(1) forty-two percent (2) twenty-four percent (3) twenty-one percent (4) twelve percent. The total is ninety-nine percent because of rounding error.

Teacher organization: rank-and-file participation

Teacher data is used to form this variables by summing the means across teachers at each school for the following two items:

How many teachers would you estimate regularly attend meetings of the teachers' organization or are otherwise active in its affairs?

How many teachers would you estimate regularly talk with the building representative about teachers' organization business?

Response categories ranged from none (1) to all (5) for both items.

The mean for this variable is 5.55. The standard diviation is .94.

Teacher organization: strikes

This variable is the administrator's report of the number of times the teachers of the school have gone on strike since January 1, 1970, coded from none (0) to six or more times (6). The mean is 1.03. The standard deviation is .82.

Teacher organization: grievances

This variable is the administrator's report of the number of grievances that have been filed by teachers at the school since September, 1974. The mean is 1.41. The standard deviation is 2.01.

Normative consensus: among faculty

The operationalization here is the mean agreement across teachers at each school with the statement: "Teachers in this school are more united by what they have in common than divided by their differences." The higher the code, the greater the perceived consensus among teachers.

Normative consensus: between faculty and principal

This scale was formed by principal component analysis. The items and their loadings are:

The principal usually disagrees with the majority of the faculty on issues relating to teaching as a profession (-.48).

I frequently find myself in disagreement with the principal (-.61).

The majority of the faculty often disagrees with the principal on how the school be run (-.63).

This scale accounts for about fifty-six percent of the common variance among the items.

Normative consensus: among administrators

This variable is created by taking the mean across administrators in the school of agreement with the statement: "My superior sometimes asks me to do things I do not think are a good idea." The code is reversed so that a higher code indicates consensus. "Superior," of course, refers to a different administrator in the responses of the principal and of an assistant principal. In treating both referents together this consensus includes some central office administrators as well as building administrators.

Upward communication: behavioral measure

This variable compares teacher and administrator listings of "the five problems which you feel are of greatest concern to your school's faculty with respect to the operation of the school and life in it."

The problems mentioned were coded in detailed categories derived from the mentions in a sample of questionnaires. These detailed categories fell in the following twenty-five areas:

A. Students

1. Behavior, discipline
2. attendance, tardiness
3. learning skills, learning behavior
4. learning attitudes
5. other

B. Teachers

1. characteristics of (other) teachers
2. relationships
3. other

C. Principal, administrators, school board

1. personal qualities of administrators (not school board)
2. relating to teachers
3. school board
4. other

D. Administration of the school

1. policies
2. controlling students, discipline
3. coordination
4. related to teaching, classroom
5. insufficiencies (usually from budget cuts)
6. physical conditions at school
7. contract, labor relations

E. Program for students

1. curriculum
2. extra-curriculum
3. other

F. Community, parents

1. community
2. parents
3. other

Only these twenty-five areas were used in comparing teacher and administrator mentions for matches. The number of matches between a teacher mention and an administrator mention at a school was standardized for variation from school to school in the number of administrators and teachers responding and the number of problems actually mentioned.

Upward communication: perceptual measure

This variable sums the proportions of teacher-respondents at a school who agree that "the principal spends a good deal of his time on matters of everyday concern to the faculty" and that "teachers feel free to approach the principal with school problems."

Uncertainty: describing faculty

This variable was formed by principal component analysis of teacher responses to six items. The school value was derived by taking the mean across teachers at each school. The constituent items and their loadings on the scale are:

There is no teaching technique suitable for the majority of students at this school. (.45)

Teachers at this school must constantly adjust to new ways of doing things. (.46)

The students at this school are very different from one another. (.39)

It is hard for a teacher at this school to know what to do to educate students effectively. (.50)

Many teachers at this school are unsure whether they will be working here next year. (.25)

Teachers at this school do not know what others expect of them. (.36)

The scale explains about thirty-five percent of the common variance among the items.

Uncertainty: describing self

Principal component analysis was used to form a scale from teacher data. The school-level variable was derived by taking the mean across teacher-respondents for teacher school. The items and their loadings on the scale are:

I often feel tense about my life at school. (.56)

I often feel uncertain about my life at school. (.59)

I often feel insecure about my like at school. (.59)

The scale explains about eighty-four percent of the common variance among the items.

Facilitative dependence: overall, on other teachers, on the principal

Overall dependence was operationalized from teacher responses to the question: "Overall, what effect do others at school have on the successful completion of a teacher's job at this school?' The response categories range from "a great help" through "some help," "little effect," "some hindrance," to "a great hindrance." For this measure of dependence on others, helping and hindering were considered equivalent aspects of

dependence. The measure used, therefore, ranges from "little effect" (coded 1) to "a great help" or " a great hindrance' (coded 3). The dependence of the individual teacher on other teachers and on the principal was assessed by asking the same question specifically with respect to "other teachers" and then with respect to "to principal." The same coding scheme, including folding the original scale, was used. The three variables measure facilitative dependence rather than dependence in general, because teacher respondents almost universally avoided the two "hindrance" responses. For the measure of overall dependence, dependence on other teachers, and dependence on the principal, respectively, only eight percent, four percent, and eleven percent chose these categories. Essentially, therefore, the responses range from "little effect" to "a great help." Variables at the school level were formed, finally, by taking means across teacher respondents for each school on each of the three variables.

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